This user manual is intended to provide instructions on how to use the Pension Outlook tool in calpers.ca.gov. The contents are organized as follows:

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Purpose of Pension Outlook

The purpose of Pension Outlook is to assist contracting Public Agencies and Stakeholders with planning and budgeting for pension costs into the future. Pension Outlook provides the Baseline Projections of funded status and employer rates based on the most recent annual actuarial valuation report prepared for a specific plan. Users can vary financial parameters in the application to generate alternative cost scenarios. These variations provide an opportunity to understand the pension cost drivers and potential budget impacts by scenario for that plan.

Please read the disclaimer upon opening the application carefully as CalPERS wants to make sure that the random scenarios included in Pension Outlook or any scenarios developed by the User should not be relied upon to represent the actual future funded status nor the actual future employer contributions. (See Appendix 1 for a screen shot)
Accessing Pension Outlook

To navigate the Pension Outlook tool in calpers.ca.gov, follow the steps below:

1. Click the Employers tab on the top menu

2. The Employers webpage displays

3. Click the Actuarial Resources link
Accessing Pension Outlook (Cont.)

4. The Actuarial Resources webpage displays

5. Click the Pension Outlook Overview link.
Accessing Pension Outlook (Cont.)

6. The Pension Outlook Overview screen displays.

7. Click the Pension Outlook Login link.
8. The Pension Outlook sign-in screen displays.

![Login Screen](image)

**Note:** For instructions on registering for an account, see the Register for an Account section.

9. If you've already registered, provide your login information and click the Log In button.

![Login Screen](image)
Accessing Pension Outlook (Cont.)

10. The Employer View of the Pension Outlook tool displays.

![Employer View](image-url)
Register for an Account

To access the Pension Outlook tool, you must register for an account. Registration only needs to occur once. After registration, you can use the email address you provided and password you selected to login to the tool.

1. To register for an account, click the Register button.
2. The Registration Information webpage displays
3. Populate the required fields to register

4. Click the Submit button
5. A banner appears at the top of the screen, showing that the information was submitted successfully. Check the email account provided for a confirmation email to complete the registration process.
Viewing Public Agency Plan Information

After logging-in, users can select Public Agency plans in Employer View of the Pension Outlook tool. To select a specific Public Agency plan, follow the steps below:

1. Verify that Employer is selected in the Select View drop-down menu

   ![Select View Drop-down Menu]

   Use of this model is subject to acceptance of CalPERS’ Terms and Conditions of Use. All projections are hypothetical and may differ significantly from actual experience.

2. Enter the Employer Name

   ![Employer Name Field]

   As you type, Agency names will appear that match the text entered.

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Viewing Public Agency Plan Information (Cont.)

3. The Valuation Rate Plan drop-down menu will populate based on the employer you selected.

4. Select the Valuation Rate Plan you would like to view.
Viewing Public Agency Plan Information (Cont.)

5. Information for the selected Valuation Rate Plan displays
Viewing PERF, Aggregated Public Agency, California State Agency and Schools Pool Information

After logging-in, users can view information for the Public Employees Retirement Fund (PERF), all Public Agency Miscellaneous plans, all Public Agency Safety plans, State of California Plans and/or the Schools Pool in the Pension Outlook tool. To accomplish this, follow the steps below:

1. Select Fund from the Select View drop-down menu

2. The Fund View displays, with the PERF as the default plan

3. To change plans, select which one you would like to view in Plan Type drop-down menu
4. Information for the selected plan displays

![Fund View](image)

**Modeling Assumptions**

### Economic Assumptions

<table>
<thead>
<tr>
<th>Details</th>
<th>Baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discount Rate</td>
<td>7.00%</td>
</tr>
<tr>
<td>Payroll Growth</td>
<td>2.750%</td>
</tr>
<tr>
<td>Inflation Rate</td>
<td>2.500%</td>
</tr>
</tbody>
</table>

### Investment Scenario Chosen

<table>
<thead>
<tr>
<th>Rate</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.00%</td>
<td>1</td>
</tr>
<tr>
<td>7.00%</td>
<td>9</td>
</tr>
<tr>
<td>7.00%</td>
<td>0</td>
</tr>
</tbody>
</table>

### Other Assumptions

<table>
<thead>
<tr>
<th>Details</th>
<th>Baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERSA</td>
<td>Yes</td>
</tr>
<tr>
<td>Transition Years</td>
<td>15</td>
</tr>
<tr>
<td>Committed Payment</td>
<td>No</td>
</tr>
<tr>
<td>ADP</td>
<td>No</td>
</tr>
</tbody>
</table>

### Funded Ratio

**Accrued/Assets/Unfunded Accrued Liability**

![State Miscellaneous Funded RatioProjected Over 10 Years](image)
Modeling Assumptions

By clicking on the Modeling Assumptions button, the User can select the appropriate financial scenario or click the reset assumptions button to produce the Baseline Projections based on the most recent valuation report. Within this section are the following user specified entries:

1. Years to Project
2. Discount Rate
3. PEPRA Transition Period
4. Additional Discretionary Payment
5. Investment Scenarios

Additional information about each of these user specified entries can be found in the other sections of this document.
Years to Project / Projection Period

User can choose to project 10, 20 or 30 years. To change the number of years in the projection, follow the steps below:

1. Select the desired years **Years to Project** radio button

2. Click the **Submit** button
Years to Project (Cont.)

3. The desired number of years displays
Discount Rate

Users can choose to model the impact of different discount rates on the plans funded status or employer contribution rates. Any discount rate between 6% and 8% is available for modeling based on the sensitivity results provided in the most recent actuarial valuation report. Inflation remains static even if a different discount rate is modeled. To model the impact of a different discount rate, follow the steps below:

1. Enter a discount rate into the **Discount Rate %** field

2. Click the **Submit** button
Discount Rate (Cont.)

3. The desired results display
   Note: Both the baseline and new scenario are displayed
PEPRA Transition Period

Users can model the reduction in employer normal cost due to the transition of active members in the plan from Classic status to PEPRA status. This reduction can be modeled using 10, 15 or 20 years for the full transition period.

The Baseline projection reflects a PEPRA transition period of 15 years which is roughly the level of turnover observed to date for a typical plan. Plans exhibiting slower turnover should select a PEPRA transition period of 20 years, while those plans with high turnover would be advised to select a PEPRA transition period of 10 years. Users can also turn off the PEPRA Transition Period.

Changing PEPRA Transition Period

To change the modeling of PEPRA Transition Period, follow the steps below:

1. Verify the Yes radio button is selected in the PEPRA section
Changing PEPRA Transition Period (Cont.)

2. Select the desired **Transition Years** radio button (if applicable)

3. Click the **Submit** button
4. The desired results display

![Diagram showing Funded Status and Employer Rates over time. The diagram includes lines for Base Funded Status, Base Employer Rate, and Modeled Funded Status. The Valuation Date range is from 2012 to 2040. The funded status percentages range from 65% to 105%, and the employer rates range from 0% to 45%.]
Turning Off PEPRA Transition Period

To turn off PEPRA Transition Period, follow the steps below:

1. Click the No radio button in the PEPRA section

2. Click the Submit button
Turning Off PEPRA Transition (Cont.)

3. The desired results display

![Graph showing Funded Status and Employer Rates over time](image)
Additional Discretionary Payments (ADP's)

Users can model ADP's using the Pension Outlook tool. For an Agency with multiple plans, the same ADP's will be included in each plan on the Budget download. These ADP's are assumed to be made in the middle of the fiscal year (i.e. January 1st), and are applied to the amortization base with the longest period. More precise rate impacts with exact payments dates and applications to different amortization bases can be determined using the Managing Employer Contributions spreadsheet available from the Actuarial Office.

To model an ADP, perform the steps below:

1. Select the Yes button in the Additional Discretionary Payment section

2. Additional fields appear with 1% of Unfunded Actuarial Liability (UAL) for the plan for reference.
Additional Discretionary Payment (Cont.)

3. Enter the amount of the anticipated ADP in $ Millions (e.g. $1.2 will give an ADP of $1,200,000) and the number of annual payments desired.

4. Click the Submit button
Additional Discretionary Payment (Cont.)

5. The desired results display with an ADP of $1.2M for each of the next 2 years.
Investment Scenarios

Users can model future investment scenarios by selecting pre-loaded random scenarios provided for the most recent 2017 Asset Liability Management (ALM) Workshop, or by entering an investment scenario of their own choosing.

If a User selects a random scenario, the User will have the option of selecting a random scenario grouped by percentiles. For example, someone looking for a slightly pessimistic scenario might select from the 25-50% percentile. For a slightly optimistic scenario the User should select from the 50-75% percentiles. Note that the number of the random scenario generated will be provided on the summary for future reference.

If the User is interested in entering their own investment scenario, the User will enter the investment return and the associated period in the Investment table. For example, entering 6.70% for 1 year replicates the actual investment return for fiscal year 2018-19. The total number of years in this section will default to the length of the chosen projected period.

Selecting a Random Investment Scenario

To select a Random Investment Scenario, follow the steps below:

1. Click the **Yes** radio button in the Random Investment Scenario section

![Random Investment Scenario](image-url)
Selecting a Random Investment Scenario (Cont.)

2. Additional selections appear in the Random Investment Scenario section

   Select Yes or No.

   Generate New Random Scenario.

   Percentile:
   - 75-100%
   - 50-75%
   - 25-50%
   - 0-25%

3. Make selections as desired

4. Click the Submit button
Selecting a Random Investment Scenario (Cont.)

5. The desired results display

![Funded Status and Employer Rates Diagram]
Entering a User Specified Investment Scenario

To enter a User Specified Investment Scenario, follow the steps below:

1. Verify the **No** radio button is selected in the Random Investment Scenario section

2. Enter desired Rate(s) and Year(s)

3. Click the **Submit** button
4. The desired results display

![Funded Status and Employer Rates Graph](image)

### Submit Button

Once the User is satisfied with their financial scenario they should select the submit button on the modeling assumptions section to proceed to the Summary results of the chosen scenario.
Summary Results

The Summary Results provide graphic projections of the Plan’s Funded Status and the Employer Contribution rate under the Baseline assumptions and the modelled scenario for the Projection Period selected.

Key cost metrics are also displayed on this screen. See next page for more details.
Key cost metrics include:

1. Cost Over the Projected Period (e.g. 30 Years)
2. Future Funded Status (including 3, 5 and 10 years into the future)
3. Employer Rates (average and maximum over projected period)
4. Plan Cost Diagnostics (comparisons to current and baseline)
Funding Results

This Tab provides graphic projections of the accrued liabilities (AL), market value of assets (MVA) and the unfunded actuarial liability (UAL). The User can select the results they would like to display on the graph by choosing between the baseline results and/or the modeled scenario for the AL, MVA and UAL.

To change the results that are displayed, follow the steps below:

1. Select the checkboxes next to the desired details
Changing Displayed Funding Results (Cont.)

3. Click outside of the dropdown menu, the desired results display
Cash Flow Results

This Tab provides projections of the benefit payments (based on the most recent valuation report) and employer contributions based on the baseline and modeled scenario.
Budgeting Results

This section contains year by year projections of the Employer Costs using the Baseline assumptions and any modeled scenarios. These results are provided for each plan that the Employer has along with the combined results of all the plans (if applicable). Annual relative increases in cost are provided in the tables along with an impact on costs in comparison with the Baseline projections based on the modeled scenario.

There is a download link that allows the User to download a Microsoft Excel spreadsheet that contains the 30 years of projected cost information, plan assets, liabilities and funded status.

<table>
<thead>
<tr>
<th>Economic Assumptions</th>
<th>Investment Scenario Chosen</th>
<th>Other Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
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Download the Fiscal Year Cost and Annual Relative Increase in Cost
Microsoft Excel Spreadsheet
The Microsoft Excel spreadsheet contains the following on separate worksheets:

1. Terms of Use
2. Assumptions
3. Plan Results
4. Combined Results

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Terms of Use</td>
<td>2</td>
<td>Assumptions</td>
<td>3</td>
</tr>
</tbody>
</table>
Appendix 1 – Terms and Condition of Use

Upon registering for a Pension Outlook account, users must agree to the following terms and conditions before gaining access to the tool:

Terms and Conditions of Use

Use of the model is subject to acceptance of these Terms and Conditions of Use.

The model is intended to be used solely for informational purposes. The hypothetical projections presented by the model are not intended to be actual estimates of future contribution rates or investment growth. Plan contribution rates and funded status will be based on actual experience, which may significantly differ from the hypothetical projections calculated using the model.

Hypothetical projections of plan results obtained using the model are based on the information contained in the plan’s most recent valuation report, the assumptions used therein, and the information that you input into the model. The model will not automatically incorporate adjustments to the discount rate required under the CalPERS Funding Risk Mitigation Policy, which generally requires a reduction in the discount rate if CalPERS investment performance significantly outperforms the current discount rate.

The actuarial calculations performed by the model are based on a number of assumptions about very long-term demographic and economic behavior. Unless these assumptions (e.g., termination, death, disability, retirement, salary growth, and investment return) are exactly realized each year, there will be differences between the hypothetical projections obtained using the model and your plan’s actual required contribution rate and funded status on a year-to-year basis.

These year-to-year differences between actual experience and the assumptions are called actuarial gains and losses and serve to lower or raise contribution rates from one year to the next. Actual contribution rates will inevitably fluctuate over time and may vary significantly from the hypothetical projections you obtained using the model.

Nothing contained herein or in the model is intended to constitute financial advice. CalPERS is not responsible for any hypothetical projections obtained using the model or any decisions or actions taken in reliance upon such projections. CalPERS disclaims any and all liability for misrepresentations regarding the accuracy of the hypothetical projections obtained using the model. CalPERS does not guarantee the accuracy of any of the hypothetical projections obtained using the model.

By accepting below, I acknowledge that I have read, understand, and agree to, these Terms and Conditions of Use.
Terms and Conditions of Use (Cont.)

Terms and conditions can be accessed in Pension Outlook by clicking on the Terms and Conditions hyperlink: